

NOTE ON PACHYCHEILUS VIOLACEUS PRESTON.

BY CHARLES T. RAMSDEN.

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This species, the largest Melanian of Cuba, was described by Mr. Preston in the Proceedings of the Malacological Society of London, ix, p. 199, March, 1911, the locality being indefinitely given as "Cuba, alt. 2000 feet." The circumstances of the discovery of this remarkable species may be of interest. I found it in the Santa Maria river at Camp Yberia, 2000 feet above sea level, on September 17th, 1909. This place is 25 miles west of the city of Baracoa, on the north coast of Cuba. The hills in which Camp Yberia lies are known as the Sierra del Cupey, and the place is by no means easy of access.

The shells are quite abundant, all being squarely truncated. They are purplish-brown, almost black, with indistinct light bands below the suture, at the periphery and around the axis. These bands show distinctly on looking through the shell from the inside. Or the shell might be described as pale olive, with two broad purple-brown bands. The surface has the fine striation of the Central American species of *Pachycheilus*.

THE USE OF THE GENERIC NAMES UNIO, MARGARITANA, LYMNIIUM AND ELLIPTIO, AND OF ANODONTA AND ANODONTITES.

BY A. E. ORTMANN.

Recently an attempt has been made to show that the general use of the old names of *Unio*, *Margaritana* and *Anodonta* is not correct, but that they should give way to *Lymnium*, *Unio* and *Anodontites*, respectively. This was first indicated by Thiele (Nachr. Bl. deutsch. Malakozool. Ges. 41, Heft 1, 1909, p. 29) and carried out by him subsequently (J. Thiele, Mollusken, in: Brauer, Suesswasserfauna Deutschlands, Heft 19, 1909, pp. 32-35).

I. To the first change (*Unio* into *Lymnium*, etc.) an objection was promptly taken by F. Haas (Nachr. Bl. deutsch. Malakozool. Ges. 41, Heft 2, 1909, pp. 68-72), to which, however, Thiele replied, maintaining his view (Beitr. Kenntn. mitteleurop. Najaden, Beil. Nachr. Bl., etc., No. 3, 1909, p. 48).

The evidence offered for either view may be condensed as follows:

The original genus *Unio* of Retzius, 1788, contains species both with and without lateral hinge teeth, and no type is named. In 1792 Bruguière describes the genus *Unio* as possessing such teeth, without saying, however, what is to become of those species which have no lateral teeth. In 1815 Oken divided the genus *Unio*, calling the species with lateral teeth *Lymnium* and those without teeth *Unio*. In 1817 Schumacher did the same, but retained *Unio* for the species with teeth, while for those without teeth he introduced the new generic name *Margaritana*.

Thiele now claims that Oken was the first to *split* the old genus, and that his names have the priority, while Haas claims that Bruguière had the *intention* to split the old genus, and that he thus has the priority over Oken. With reference to the latter claim, Thiele says that there is no evidence whatever in Berguière's paper to show that he intended to divide the genus *Unio*.

Both authors are right. Bruguière *may* have had the intention of dividing the genus, but there is no positive proof of it, and as long as the dispute concerns the possible *intentions* of Bruguière the question will never be settled. But I should like to offer here two suggestions which probably will help us.

(1) *Unio* Retzius is a genus *without a type, but with a diagnosis*, which includes species with and without lateral teeth. No matter what the *intentions* of Bruguière were, the *fact* remains that he, with a full knowledge of Retzius' diagnosis, *gave another diagnosis*, in which he mentions only the presence of lateral teeth. Thus, although we cannot say that the genus *Unio* has been *split* or *divided*, surely the concept has been changed and *restricted*. This is a perfectly legitimate way in nomenclature, and thus Bruguière introduced the first change in the definition of the genus, and consequently has the priority over Oken. Oken, according to our modern rules, had no right any more to use *Unio* in such a way that it would exclude all of Bruguière's species.

(2) *Unio* Retzius is a genus without a type, that is to say we do not know which one of the six species enumerated by Retzius is *the* type. Yet looking again at the diagnosis, we see it says that in "most" species (*in plurimis*) lateral teeth are present. This makes it perfectly clear that Retzius regarded the absence of lateral teeth (in one species) as an exception to the rule, while the other five spe-

cies represent the rule, or typical condition. While we thus do not know the type, we know, on the other hand, *which species should not be the type*.

Now if any subsequent author is to select a type species, this latter surely should correspond to the original diagnosis, and should represent the rule but not the exception. Haas cites a rule of the international code of nomenclature (section 35), which says that no species should be selected as type which has only "doubtfully" been assigned to the genus by the original describer. Of course, taken verbally, this rule does not entirely fit the present case, but without much difficulty it might be stretched so as to cover it. If *U. margariferus* is selected as type, as Oken does, a species is taken which is abnormal and does not fully correspond to the original diagnosis, while a number of species which do fit the original diagnosis are thrown out. While Bruguière's change in the diagnosis consists only of the dropping of the word "most" (*plurimis*), thus throwing out the exceptional case only, Oken's definition of the genera involves a complete change, for instead of having lateral teeth "in most cases," as formerly, *Unio* now has "never any" lateral teeth, practically the opposite.

These two considerations are, as far as I can see, consistent not only with common sense, but also with the rules of nomenclature. There is no rule which says that an author has no right to change the concept of a genus by modifying the diagnosis, as long as one or some of the original species remain included, and this is what Bruguière has actually done, and we see it black or white before us. And further, in doing this, Bruguière simply carried out an idea already suggested by Retzius, namely, that the genus *Unio* consists of a number of species representing fully the normal condition of the genus, and of an additional one which forms an exception.

Consequently Bruguière has the priority, and *Lymnium* of Oken becomes simply a synonym of *Unio*, as restricted by Bruguière. For the remaining species (*U. margariferus*) Schumacher's name *Margaritana* is to be used.

I may mention here incidentally that a number of North American species are retained under the genus *Unio* by Simpson. I do not think that they should remain congeneric with the European forms, for reasons which will be set forth in another paper. For most of the American forms the generic name *Elliptio* Rafinesque, 1819,

which has been used by Simpson for a section of *Unio*, will be appropriate, and its use will conform to the rules of nomenclature. The type species of *Elliptio* is *U. crassidens* Lamarck. Congeneric are at least the following species: *gibbosus* Barnes, *complanatus* Dillwyn, *fisherianus* Lea and *productus* Conrad, and probably most of the other North American species, at least those which group with the species named.

II. The substitution of *Anodontites* Bruguière, 1792, for *Anodonta* Lamarck, 1799, has also been advocated by Thiele (l. c.), and is not objected to by Haas (l. c.).

I think this case is absolutely clear, and there is no earthly reason for this change. *Anodontites* was created by Bruguière in order to describe a new species, *A. crispata*, from South America. He also says that several other species belong to *Anodontites*, two of Linnæus, which he names, and seven others which he does not mention. This leaves not the slightest doubt that *Anodontites crispata* is the type of *Anodontites*. It is the first species described under this generic name, and it consequently always has to remain with this genus unless the latter is dropped for other reasons. In Simpson's synopsis, however, this species stands under *Glabaris* Gray, 1847. This is against the rules. Since there is no objection whatever to the generic name *Anodontites*, *Anodontites crispata* has to stand, and all other species of the modern *Glabaris* have to go with it, so that *Glabaris* becomes a synonym of *Anodontites*, which is a South American genus. This opens the way for the admission of Lamarck's *Anodonta*, the type of which is, according to Simpson, *Mytilus cygneus* of Linnæus.

We may now rejoice, for we have three valid generic names among the Najades which we must not confuse, *Anodontites* Bruguière (= *Glabaris* Gray), *Anodonta* Lamarck and *Anodontoides* Simpson, disregarding the synonyms *Anodon* Oken, *Anodontes* Cuvier, *Anodontopsis* Simpson and the fossil *Anodontopsis* McCoy.

THE LAND SHELLS OF GARDEN KEY, DRY TORTUGAS, FLA.

BY GEORGE H. CLAPP.

While at Key West last June on the "Eolis," Henderson and I were invited by Dr. Alfred G. Mayer, in charge of the Carnegie Institution Biological Station on Loggerhead Key, Dry Tortugas, to